

**REMARKS**

Claims 1-23 are pending in this application. By this Amendment, claim 1 is amended to correct informalities. No new matter is added. A Declaration under 37 C.F.R. §1.132 is attached. Reconsideration of this application is respectfully requested in view of the above amendment and the following remarks.

Entry of the amendments is proper under 37 CFR §1.116 because the amendments simply satisfy a requirement of form asserted in the previous Office Action. The amendments are necessary and were not earlier presented because they are made in response to arguments raised in the final rejection. Entry of the amendments is thus respectfully requested.

The Office Action, on page 4, objects to claim 1 for an informality. Claim 1 is amended to obviate the objection. Accordingly, withdrawal of the objection to claim 1 is respectfully requested.

The Office Action, on page 5, rejects claims 1-8 and 14-23 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,568,141 to Antes. The Office Action, on page 8, rejects claims 9-12 under 35 U.S.C. §103(a) as being unpatentable over Antes in view of U.S. Patent No. 6,765,704 to Drinkwater. The Office Action, on page 9, rejects claim 13 under 35 U.S.C. §103(a) as being unpatentable over Antes in view of U.S. Patent Application Publication No. 2004/0121241 to Kodama. These rejections are respectfully traversed.

In specific response to the April 13, 2010 Office Action which was issued in response to the March 2, 2010 Request for Reconsideration, Applicant respectfully submits the attached Declaration Under 37 C.F.R. §1.132 in support of the arguments made in the March 2 Request for Reconsideration.

Claim 1 recites a security device comprising, among other features, a hologram comprising: at least a first holographic image element in an image plane spaced from the surface of the microstructure, the device exhibiting at least one further image in a plane

spaced from said image plane of the first holographic image element, wherein the spacing between the first holographic image element image plane and the plane of the at least one further image is such that, on tilting the device through a maximum viewing angle of  $45^\circ$ , the first holographic image element exhibits an apparent rate of movement relative to the at least one further image, the rate of movement being at least 6mm per radian of tilt, and the product of the rate of movement and an included angle of the viewing zone defining a distance at least 18% of a dimension of the device in the parallax direction.

The Office Action asserts that Antes teaches many of the features recited in at least independent claim 1. The Office Action concedes that Antes fails to teach that a maximum viewing angle of  $45^\circ$  or the rate of movement of the first holographic image relative to the further image is at least 6mm per radian of tilt, and the product of the rate of movement and the included angle of the viewing zone defines at least 18% of a dimension of the device in the parallax direction. The Office Action asserts that it would have been obvious to a person of ordinary skill to have the maximum viewing angle be  $45^\circ$  so that images are not replayed at undesirable viewing angles. The Office Action further asserts that it would have been obvious to one of ordinary skill to select the above parameters so that the two images can be viewed distinctly so that a security article can be easily verified by an observer. This analysis of the Office Action fails for at least the following reasons.

Antes is directed to a typical document having optical-diffraction authenticating elements. Antes is a classic Kinegram® disclosure wherein kinetic light patterns are provided in a security device by predetermined 2D arrangement of diffraction gratings (Abstract). The optical-diffraction authenticating element in Antes provides a color pattern moving at a predetermined velocity along a predetermined track when the document is illuminated from a first direction and viewed from a second direction. Specifically, a light pattern is created with an image element or icon by subdividing the image element (see arrow on Fig. 5) to a

sequence of structure elements  $S_i$  (which are, in effect, variably shaped pixel elements). Each pixel has a particular grating pitch and orientation, but importantly is in a predetermined 2D arrangement of diffraction gratings.

In Antes, all of the image features are located on a surface plane of the device. The image features are not in a plane based from said image plane of the first holographic element, as recited in claim 1. Therefore, movement in Antes is generated not by parallax motion between objects in two planes as claimed, but instead by progressive changes in grating value in each respective structure element.

More specifically, Figs. 2, 4 and 5 of Antes may give the appearance of layered imagery, but in fact they show the 3D angular viewing hemisphere into which each structure element can theoretically replay. Fig. 2 is denoted as authenticating element 3a, whereas the color patterns 10 such as those shown in Fig. 1 move along tracks  $B_i$  and comprise individual structural elements  $S_n$  and  $S_{n+1}$ . In Fig. 4 the incident angular region which results in a color effect (Fig. 3), when viewing the structural element S at right angles, is denoted by an elliptical surface 11. Also, Fig. 5 denotes an authenticating element 3b having a single track of movement  $B_i$ , showing the various grading constants of the structure elements. Importantly, the figures do not show layered imagery but rather show the 3D angular viewing hemisphere into which each structure element can theoretically replay.

For at least the foregoing reason, and in view of the Declaration filed by the Applicant, Antes, alone or in combination with the other applied references, cannot reasonably be considered to have rendered obvious the combination of all of the features recited in independent claim 1. Further, dependent claims 2-23 would also have not been rendered obvious by any combination of the applied references for at least the dependence of these claims on independent claim 1, as well as for the separately patentable subject matter that each of these claims recite.

Accordingly, reconsideration and withdrawal of the rejections of claims 1-23 under 35 U.S.C. §103(a) over the various combinations of currently-applied references are respectfully requested.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-23 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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JAO:MJS/mcp

Attachment:

Declaration Under 37 C.F.R. §1.132

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